NGIT/VITA Dedicated SONET Access Strategy for Richmond

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Agenda

What We've Learned From You

What We Understand about SONET Services

Solutions for You

Richmond Design

What It Means for You

Services are not available in all areas. Please check with your Verizon account team for the availability of services, features and functions in your area.

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What We've Learned From You

"Verizon's Vitamin for Changing the way VITA does Business!"

- A private optical metropolitan area network designed for voice, data, and video
- An equal access infrastructure
- Extensive capabilities in service provisioning, network   management and operations
- Highly secure transport architecture
- Multiple options to facilitate storage area networking and server consolidation
- Improves quality of service
- Supplements VITA Continuity of Operations Plans (COOP)

"Meeting VITA's Current and Future Business Goals"

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What We Understand About SONET Services

- **Flexible and resilient**
- **Cost-effective and efficient**
- **Network survivability**

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What We Understand About SONET Services (cont'd)

- **Synchronous Optical NETwork:**
  - **Optical and electrical hierarchy**
  - **Interworking of transmission products from multiple vendors**
  - **Self-healing rings enabling high levels of survivability**
  - **Built into the network "backbone"**
  - **Transport for high-speed, high-volume voice, video, and data applications**

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What We Understand About SONET Services (cont'd)

Self-Healing Ring (SHR) Architecture

SHR

DS_n OC_n
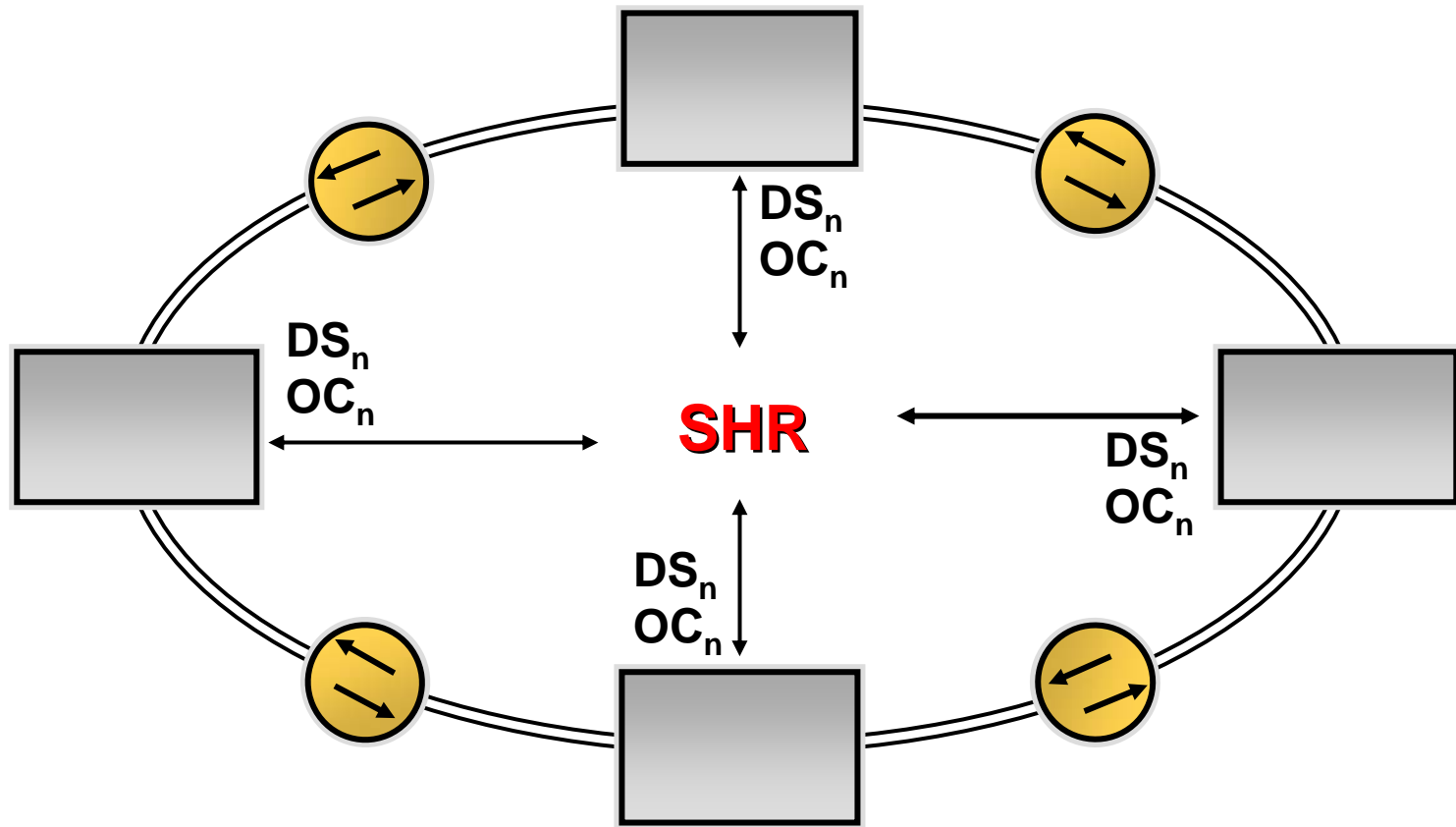
What We Understand About SONET Services (cont'd)

A Typical SONET Application

- **SONET ring architecture**
- **Need for multiple interfaces (e.g., Ethernet, TDM)**

- **Multiple locations out of three central offices**
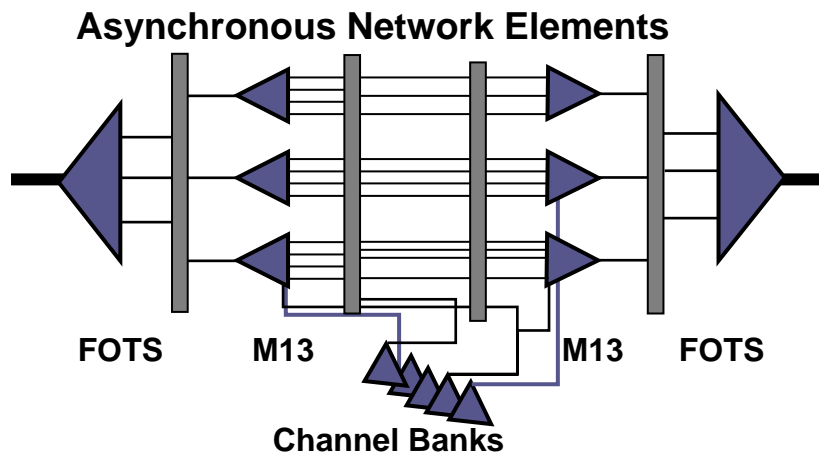- **High bandwidth**
- **Minimum three nodes**
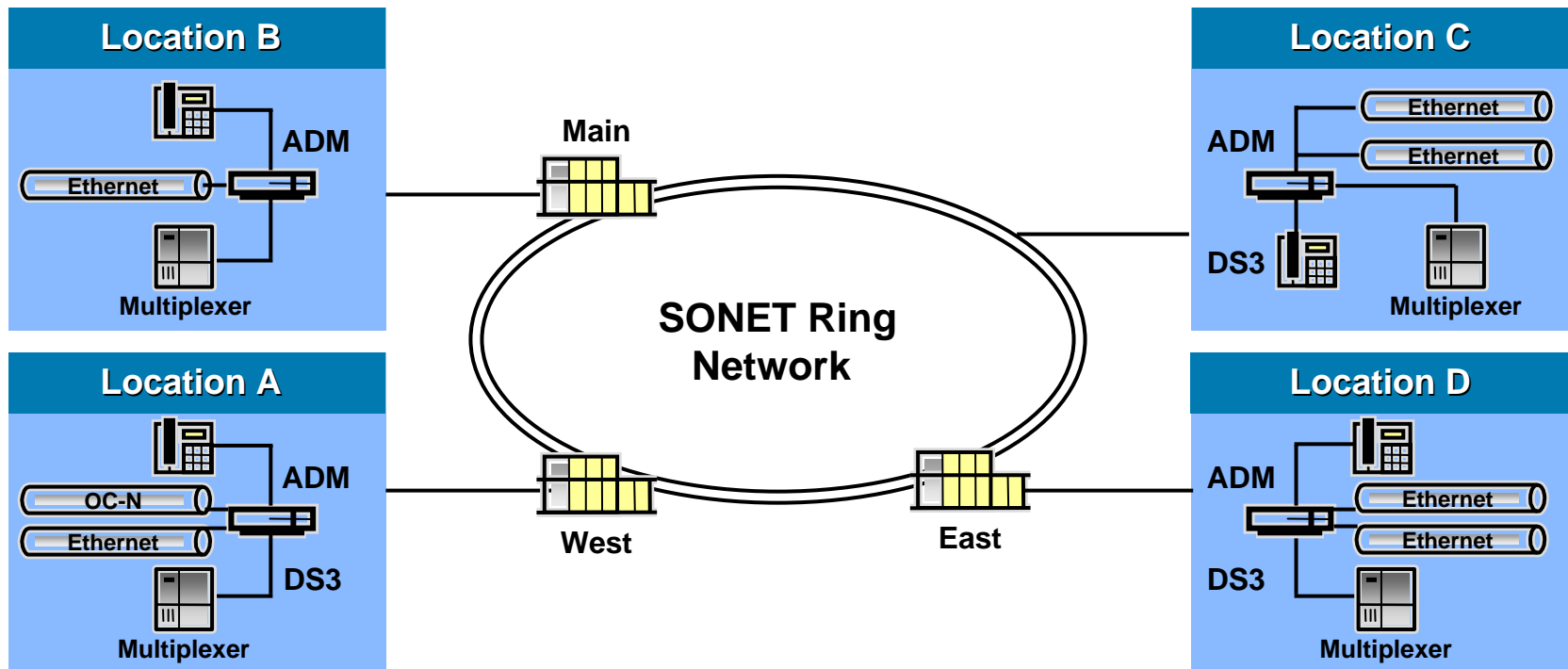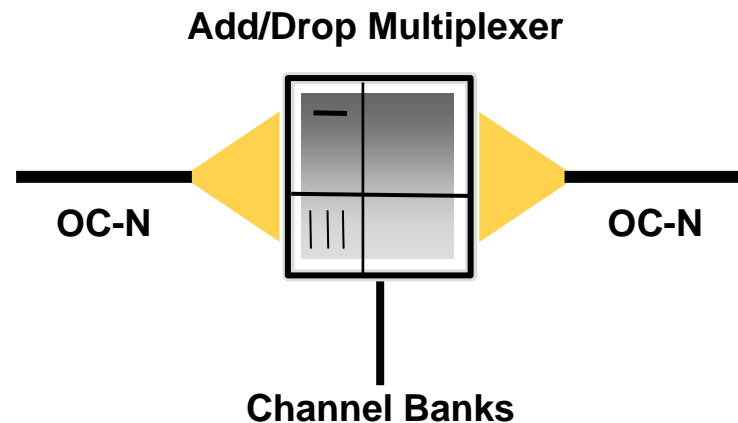
What We Understand About SONET Services (cont'd)

Standard Fiber Options	*versus*	SONET and Integrated Networking

Asynchronous Network Elements

FOTS   M13   M13   FOTS

Channel Banks

Add/Drop Multiplexer

OC-N   OC-N

Channel Banks

- **Separate network elements with separate management procedures**
- **Manual interconnect (DSXs)**
- **Capital and labor intensive**

- **Integrated network elements**
- **Electronic interconnect**
- **Capital and labor savings**

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Solutions for You

- **Superior network architecture**
- **Extensive reach of fiber deployment**
- **Strong local/metro presence**

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Solutions for You
Dedicated SONET Ring (DSR)

- **Evolution to next-generation SONET**

- **Customized, self-healing SONET ring**

- **Dedicated SONET ring can provide:**
  - **Gigabit Ethernet interfaces**
  - **Direct DS1 access**
  - **Trans-multiplexing interfaces**
  - **SAN interfaces**

- **Next-Generation Add-Drop Multiplexers (NGADMs)**

- **Natural progression to an IP network model**

- **Higher levels of survivability, reliability, and diversity**

- **Private, dedicated network**

- **Nationwide availability**
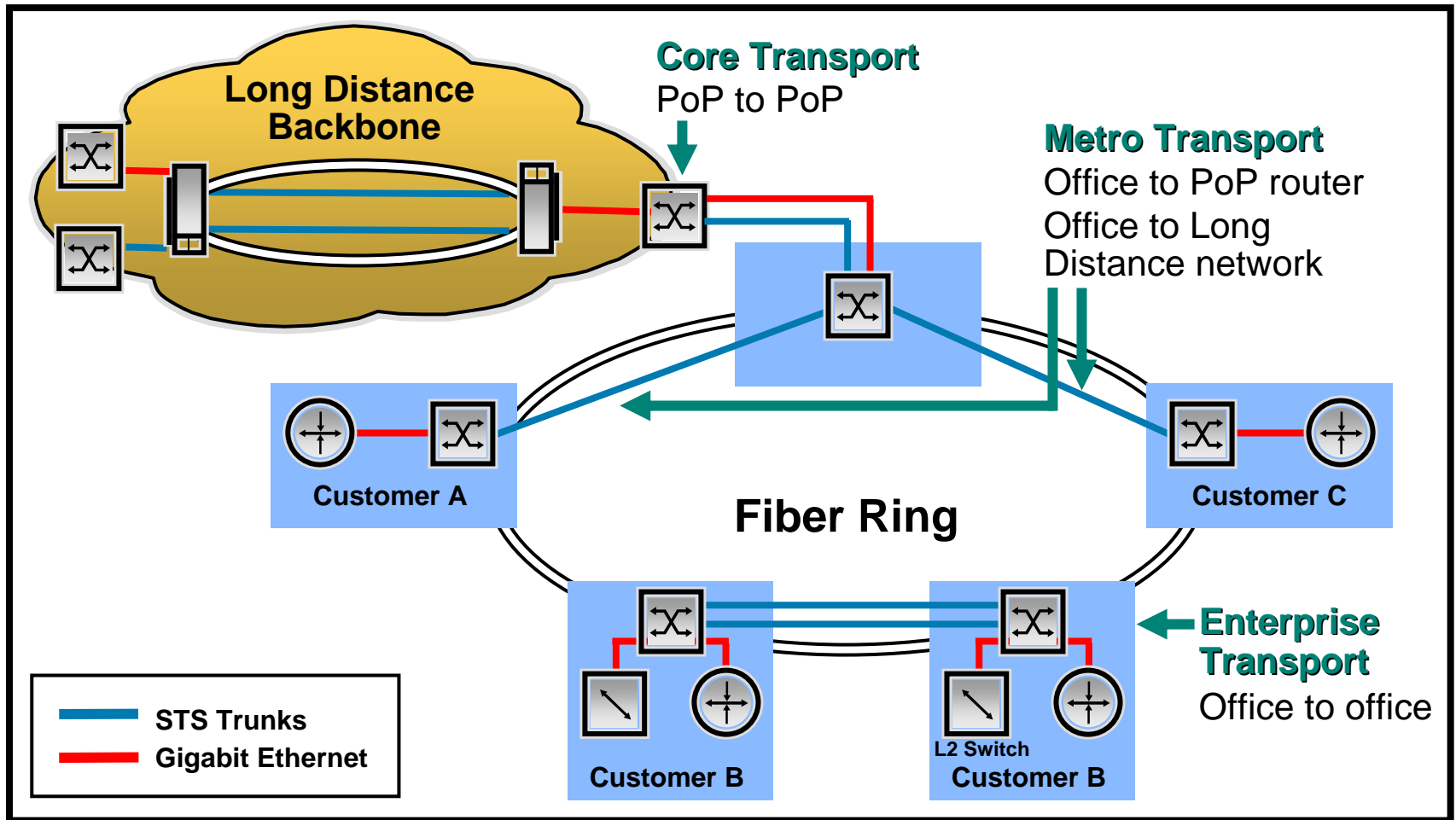
- **Long distance capability**

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Solutions for You
Next-Generation Add-Drop Multiplexer (NGADM)
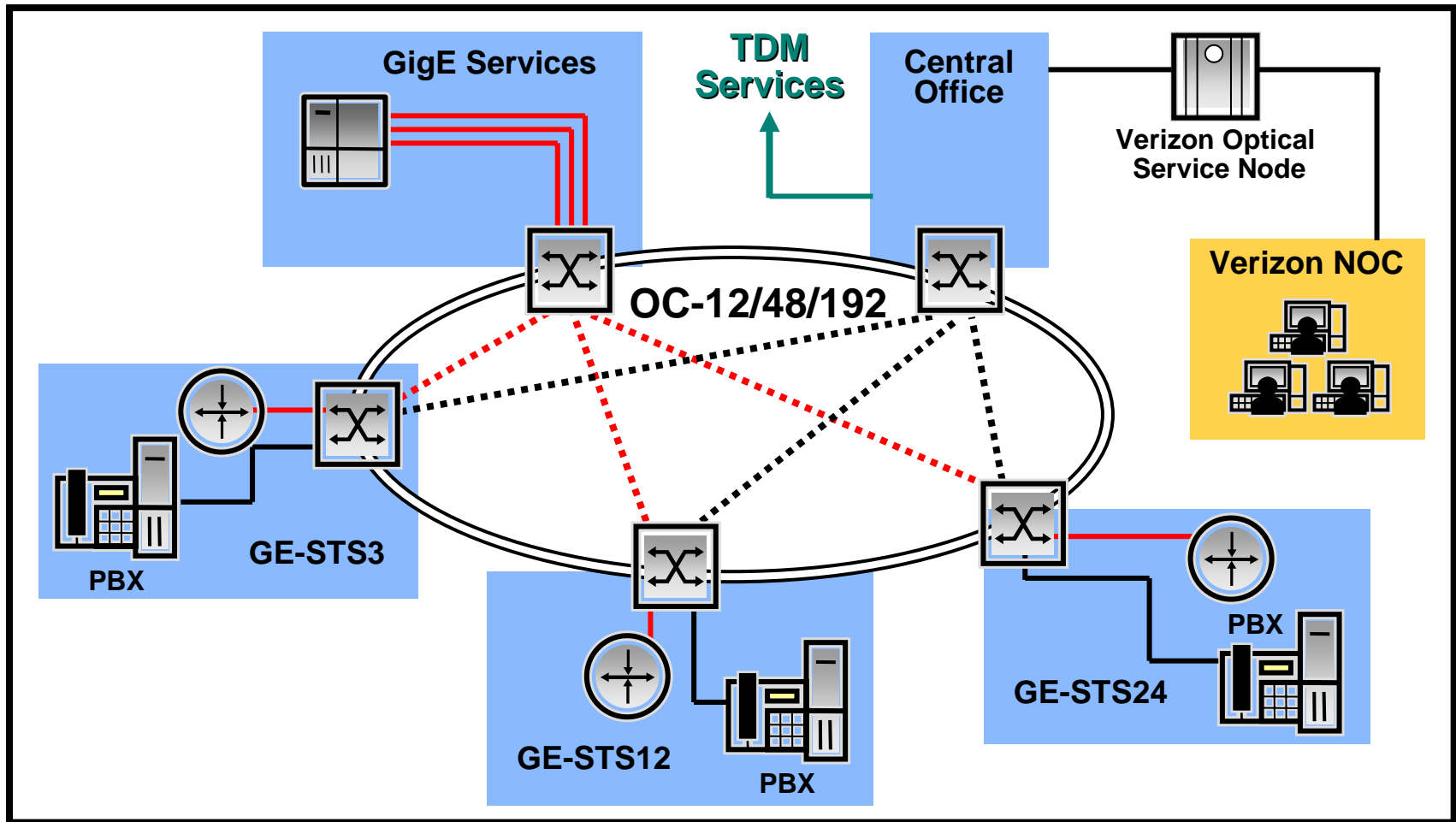
Solutions for You
Sample Configuration

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Where We Are…
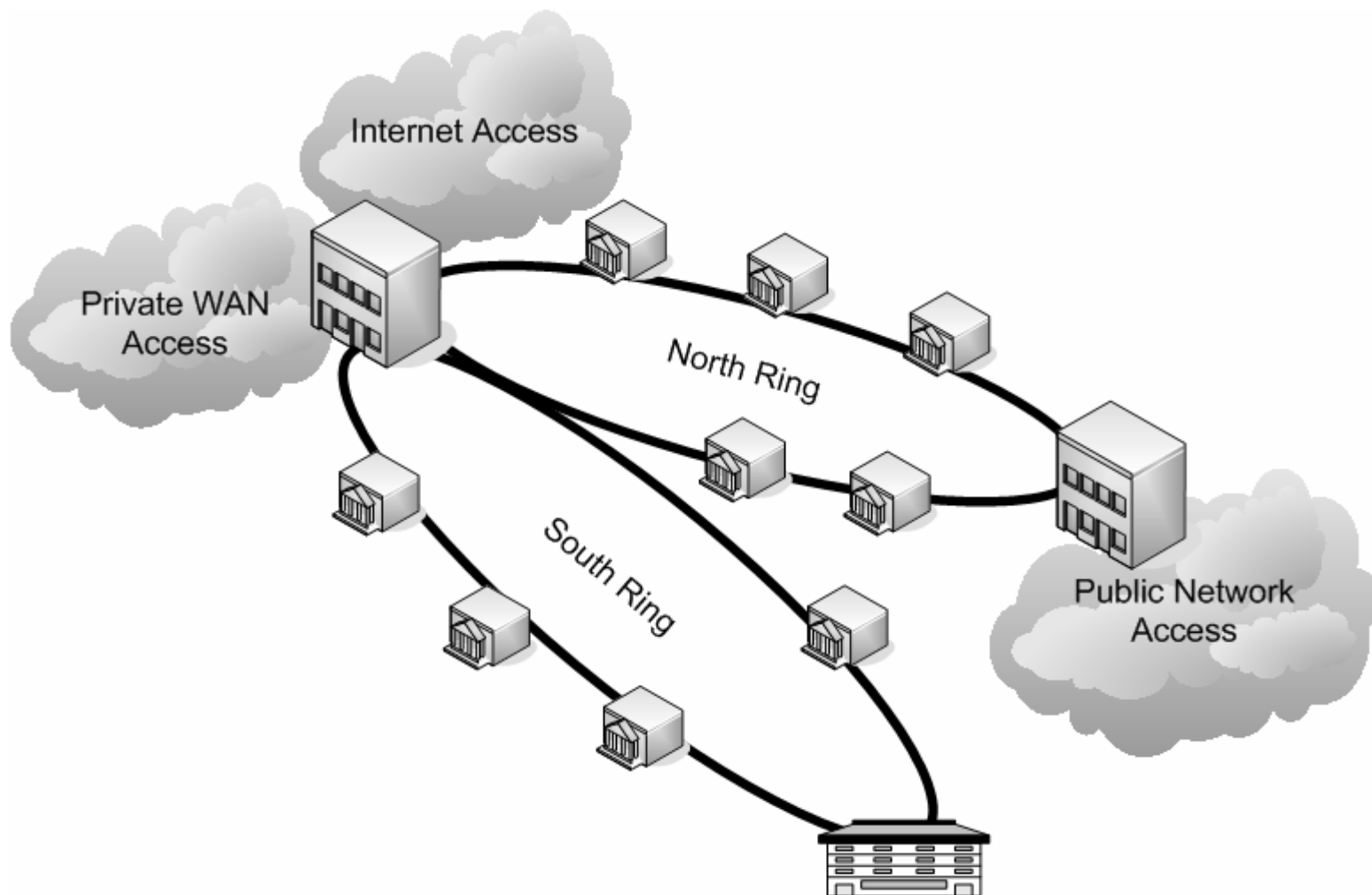
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Nodes Today

Grace local CO

Pemberton local CO

Francistown LD CO

Chesterfield Data Center

Dept of ABC

Dept of Corrections

Dept of Criminal Justice Svcs

Dept of Juvenile Justice

Dept of Motor Vehicles

Dept of Rehab. Svcs

Dept of Social Svcs

Dept of Taxation

Dept of Transportation

Environmental Quality

Monroe Building

State Police

Virginia Employment Comm.

110 S. 7th - Various

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What It Means for You

SONET-based services help provide the following benefits:

- **Reliable (Survivable)**
  - **Protection inherent with Verizon's SONET ring architecture**
  - **Secure guaranteed bandwidth – no contention**
  - **Service Level Guarantees**

- **Scalable**
  - **Customers purchase only bandwidth required**
  - **Grow without additional equipment purchases / upgrades**
  - **Up to 10G Protected on Ring**

- **Flexible**
  - **IntraLATA and InterLATA availability**
  - **Interconnects with other Verizon optical services**

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